Sarah Scherotzke

Since October 2019, I am a Professor at the University of Luxembourg.

From 2017 to 2019, I was a professor at the University of Münster. Before this, I was assistant professor at the University of Bonn. I was also a postdoctor at the Hausdorff center for mathematics, the MSRI during the Cluster algebra semester and of la Fondation des sciences mathématiques de Paris.

I did my DPhil at the University of Oxford in 2009.

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Research Interests

- Derived algebraic geometry
- Logarithmic geometry
- Cluster algebras and their categorifications
- Representation theory of finite-dimensional algebras
- Quiver Varieties

Publications and preprints

1. Derived Parabolic induction
   This is joint with Peter Schneider.

2. Relative critical loci and quiver moduli
   This is joint with Tristan Bozec and Damien Calaque.

3. The categorified Grothendieck-Riemann-Roch theorem
   To appear in Compositio. This is joint with Marc Hoyois, Pavel Safronov and Nicolo Sibilla.

4. On the profinite homotopy type of log schemes
   with David Carchedi, Nicolo Sibilla and Mattia Talpo

5. Gluing semi-orthogonal decompositions
   Journal of Algebra 559 (2020) 1-32. This is joint with Nicolo Sibilla and Mattia Talpo.

6. Parabolic semi-orthogonal decompositions and Kummer flat invariants of log schemes
   To appear in Documenta. This is joint with Nicolo Sibilla and Mattia Talpo.

7. On a logarithmic version of the derived McKay correspondence
   Compositio Mathematica, 154(12), 2534-2585. This is joint with Nicolo Sibilla and Mattia Talpo.

8. Higher traces, noncommutative motives, and the categorified Chern character
   Advances in Mathematics 309 (2017), 97-154. This is joint with Marc Hoyois and Nicolo Sibilla.

9. Kato-Nakayama spaces, infinite root stacks, and the profinite homotopy type of log schemes
   Geometry and Topology 21 (2017) 3093-3158. This is joint with David Carchedi, Nicolo Sibilla and Mattia Talpo.

10. Quiver varieties and Hall algebras
    London Math. Soc. (2016) 112 (6), 1002-1018. This is joint with Nicolo Sibilla.

11. Derived loop stacks and categorification of orbifold products
    J. Noncommut. Geom. 13 (2019), 963–983. This is joint with Nicolo Sibilla.

12. Desingularisation of quiver Grassmannians via Nakajima categories
    Algebras and Representation Theory 20, 231-243(2017)

13. Component Cluster for acyclic quiver
    Colloquium Mathematicum 144 (2016), 245-264.

14. Generalized quiver varieties and triangulated categories
    Mathematische Zeitschriften (2019), Vol.292,1453-1478

15. The nonequivariant coherent-constructible correspondence and tilting
    Selecta Mathematica (NS) (2016), Vol.22, Issue 1,38-416. This is joint with Nicolo Sibilla.

16. Desingularizations of quiver Grassmannians via graded quiver varieties
    Advances in Mathematics 256 (2014) 318-347. This is joint with Bernhard Keller.

17. Graded quiver varieties and derived categories
    J. reine angew. Math.(Crelles Journal) 2016 (713). This is joint with Bernhard Keller.

18. Linear recurrence relations for cluster variables of affine quivers
    Advances in Mathematics 228 (2011) 1842-1862.
    This is joint with Bernhard Keller.

19. The integral Cluster Category
    Int Math Res Notices Vol. 2012, No.12, 2867-2887.
    This is joint with Bernhard Keller.

20. Rank Varieties for Hopf Algebras
    Journal of Pure Applied Algebra 215 (2011), no.5, 829 to 838.
    This is joint with Matthew Towers .

21. Finite and bounded Auslander-Reiten Components in the Derived Category
    Journal of Pure Applied Algebra 215 (2011), no.3, 232-241.

22. Euclidean components for a class of self-injective algebras
    Colloquium Mathematicum 115 (2009), no. 2, 219 to 245.

23. Classification of pointed rank one Hopf algebras
    Journal of Algebra 319 (2008) 2889 to 2912.

24. Formulas for primitive Idempotents in Frobenius Algebras and an Application to Decomposition maps
    Representation Theory 12 (2008), 170 to 185.
    This is joint with Max Neunhöffer.

25. Euclidean Auslander-Reiten components in the bounded derived Category